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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

application of:

Clayton P. Spitz et al.

Serial No.: 09/804,674

Filed: March 12, 2001

For: PURCHASING CARD TRANSACTION RISK MODEL

Attorney Docket No.: FDC 0150 PUS

Group Art Unit: 2876

Examiner: Kim Ahshik

#16 Appeal Brief

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Sir:

This is an appeal from the final rejection of claims 1-22 in the Office Action dated February 5, 2003.

I. REAL PARTY IN INTEREST

The real party in interest is TeleCheck Services, Inc., a corporation organized and existing under the laws of the state of Delaware, and having a place of business at 5251 Westheimer, Houston, Texas 77056, as set forth in the assignment recorded in the U.S. Patent and Trademark Office on March 25, 2002, Reel 012753/Frame 0635.

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II. RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences related to the present appeal.

III. STATUS OF CLAIMS

Claims 1-22 stand finally rejected and are the subject of this appeal. These claims are reproduced in Appendix A.

IV. STATUS OF AMENDMENTS

No amendment after final rejection was filed.

V. SUMMARY OF THE INVENTION

The invention provides a method and system for quantifying risk of fraud, associated with a purchasing card transaction, based on charge-back history. Under one expression of the invention, the method includes obtaining a charge-back history associated with a consumer involved in the purchasing card transaction, and determining a risk score based on the charge-back history.

The step of obtaining a charge-back history may include obtaining a reason code for each charge-back included in the charge-back history. Furthermore, the method may include weighting each charge-back included in the charge-back history based on the corresponding reason code. As a result, charge-backs that are more indicative of fraud may be given greater weight than other charge-backs less indicative of fraud, such as a charge-back initiated by a card issuer because the associated merchant failed to timely clear the transaction.

The method may also include obtaining additional charge-back history associated with a machine identification number of a machine involved in the purchasing card transaction. For example, if a personal computer is being used in the purchasing card transaction, charge-back history associated with an identification number of the computer may be obtained and considered.

The step of determining a risk score may be performed in any suitable manner. For example, the risk score may be determined using a linear risk model, a regression risk model, a decision tree risk model, and/or a neural network risk model. Furthermore, other purchasing card transaction characteristics may also be considered, such as card age, card status, card last use, etc.

Further under the invention, a method for quantifying risk of fraud associated with a purchasing card transaction includes obtaining a charge-back history associated with a consumer involved in the purchasing card transaction, wherein the charge-back history includes charge-backs associated with a particular purchasing card account of the consumer, and a reason code for each charge-back. The method further includes weighting each charge-back based on the corresponding reason code; and determining a risk score based on the weighted charge-backs.

Still further under the invention, a system for quantifying risk of fraud associated with a purchasing card transaction includes an authorization source for obtaining a charge-back history associated with a consumer involved in the purchasing card transaction. Moreover, the authorization source includes a risk model for determining a risk score based on the charge-back history.

In one embodiment of the system, the authorization source includes a database for storing a reason code for each charge-back included in the charge-back history, and a

processor in communication with the database and including the risk model. Furthermore, the risk model includes instructions for determining the risk score based on the reason codes.

Because the method and system of the invention involve quantifying risk of fraud based on charge-back history, the method and system provide more accurate results than prior art risk-modeling methods and systems.

VI. ISSUES

1. Claims 1-22 were rejected under § 103(a) as being unpatentable over U.S. Patent No. 6,119,103 to Basch et al. (Basch et al. '103) in view of U.S. Patent No. 5,671,279 to Elgamal (Elgamal '279). The first and only issue is whether the Examiner has made a *prima facie* case that claims 1-22 are unpatentable under § 103(a) over Basch et al. '103 in view of Elgamal '279.

VII. GROUPING OF CLAIMS

Claims 1, 12, 13 and 22 are the independent claims involved in the appeal. Because of their similar limitations, claims 1, 13 and 22 may be grouped together. Claim 12, however, is argued separately below. Moreover, the dependent claims of claims 1 and 13 stand or fall with their respective independent claim, except where argued separately below.

VIII. ARGUMENT

1. The Examiner Failed To Make A *Prima Facie* Case Under 35 U.S.C. § 103(a)

The Examiner's proposed combination does not show all of the elements of claims 1, 12, 13, or 22.

Claim 1 is directed to a method for quantifying risk of fraud associated with a purchasing card transaction and includes “obtaining a charge-back history associated with a consumer involved in the purchasing card transaction; and determining a risk score based on the charge-back history.” As acknowledged by the Examiner, Basch et al. ‘103 fails to disclose use of charge-back history. (See page 3 of the Final Office Action mailed February 5, 2003.) More specifically, Basch et al. ‘103 fails to disclose determining a risk score based on charge-back history as claimed.

Nor does Elgamal ‘279 cure the deficiencies of Basch et al. ‘103. By contrast, the portion of Elgamal ‘279 to which the Examiner refers, discloses a process for disputing charges. (See Elgamal ‘279, column 14, ll. 27 et seq.) The process disclosed in Elgamal ‘279 does not involve obtaining a charge-back history of a consumer, let alone determining a risk score based on charge-back history.

The Examiner has failed to identify any reference or portion thereof that discloses determining a risk score based on charge-back history. Furthermore, Applicants respectfully disagree with the Examiner’s assertion that “since Basch sends/receives a transaction data such as transaction type and transaction amount (col. 3, lines 50+), it would have [been] an obvious extension to implement ‘charge-back’ as another transaction type for generating risk-related data for the transaction type.” (See page 3 of the Final Office Action.) This is a conclusory statement that is simply not supported by the above references.

Thus, the Examiner’s proposed combination falls short of Applicants’ invention as claimed in claim 1. As a result, Applicants respectfully believe that the § 103(a) rejection of claim 1 and dependent claims 2-11 is improper and should be reversed.

Applicants also respectfully believe that there is no suggestion or motivation for combining Basch et al. ‘103 with Elgamal ‘279. As noted by the United States Court of

Appeals for the Federal Circuit, there are three possible sources for a motivation to combine references: “the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.” *In Re Rouffet*, 149 F.3d 1350, 47 UPQ2d 1453 (Fed. Cir. 1998). In this case, the cited references are directed to different problems. More specifically, Basch et al. ‘103 is directed to the problem of predicting financial risk for transactions performed on a financial account, while Elgamal ‘279 is directed to the problem of secure processing of on-line commercial transactions. Furthermore, neither reference teaches or suggests using charge-back history in a risk analysis for a purchasing card transaction. Finally, the Examiner has failed to identify or explain any specific understanding or principle within the knowledge of a skilled risk analysis artisan that would motivate one with no knowledge of the present invention to make the combination. For these reasons, Applicants respectfully believe that the proposed combination is improper.

Claims 13 and 22 are each directed to a system for quantifying a risk of fraud associated with a purchasing card transaction. Claim 13 recites an authorization source that includes “a risk model for determining a risk score based on the charge-back history”, and claim 22 recites a processor that includes “a risk model for determining a risk score based on the charge-back history.” For the reasons discussed above concerning claim 1, the § 103(a) rejection of claims 13 and 22, as well as dependent claims 14-21, is believed to be improper and should be reversed.

It should be noted that many of the dependent claims of claims 1 and 13 recite additional features that are also not disclosed in any of the cited references, either alone or in combination. For example, regarding the dependent claims of claim 1, claim 2 requires that the step of obtaining a charge-back history include obtaining a reason code for each charge-back included in the charge-back history; claim 3 recites “weighting each charge-back included in the charge-back history based on the corresponding reason code;” claim 4 further requires the steps of determining how each charge-back included in the charge-back history is associated

with the purchasing card transaction, and weighting each charge-back based on the corresponding association with the purchasing card transaction; claim 5 further requires the step of obtaining additional charge-back history associated with a machine identification number of a machine involved in the purchasing card transaction, and that the step of determining a risk score include determining the risk score based on the additional charge-back history; and claim 6 requires that the step of determining a risk score include comparing the charge-back history to predetermined ranges of charge-backs.

With respect to the dependent claims of claim 13, claim 14 requires that the authorization source include a database for storing a reason code for each charge-back included in the charge-back history, and a processor in communication with the database that includes the risk model, wherein the risk model includes instructions for determining the risk score based on the reason codes. Claim 15 requires that the risk model include instructions for weighting each charge-back included in the charge-back history based on the corresponding reason code; claim 16 recites that the risk model includes instructions for determining how each charge-back included in the charge-back history is associated with the purchasing card transaction, and instructions for weighting each charge-back based on the corresponding association with the purchasing card transaction; and claim 17 recites that the risk model includes instructions for comparing the charge-back history to predetermined ranges of charge-backs in order to determine the risk score. Because these features are not disclosed in the above cited references, either alone or in combination, these dependent claims are further distinguished from the cited references.

Similar to claim 1, claim 12 is also directed to a method for quantifying risk of fraud associated with a purchasing card transaction, and includes the following steps:

obtaining a charge-back history associated with a consumer involved in the purchasing card transaction, wherein the charge-back history includes charge-backs associated with a

particular purchasing card account of the consumer, and a reason code for each charge-back;

weighting each charge-back based on the corresponding reason code; and

determining a risk score based on the weighted charge-backs.

Because claim 12 includes all of the steps of claim 1, the § 103(a) rejection of claim 12 is believed to be improper for at least the reasons discussed above concerning claim 1. In addition, as shown above, claim 12 requires that the charge back history include charge-backs associated with a particular purchasing card account, and a reason code for each charge-back. Moreover, claim 12 requires the step of “weighting each charge-back based on the corresponding reason code.” Because these limitations are also not disclosed in either Basch et al. ‘103 or Elgamal ‘279, claim 12 is further distinguished from these references. Therefore, the § 103(a) rejection of claim 12 should be reversed.

CONCLUSION

Because the Examiner's proposed combination does not show all of the elements of any of claims 1-22, the Examiner has failed to make a *prima facie* case that claims 1-22 are unpatentable under § 103(a). Furthermore, the Examiner's proposed combination is believed to be improper. Therefore, the final rejection of claims 1-22 should be reversed.

The fee of \$320.00 as applicable under the provisions of 37 C.F.R. § 1.17(c) is enclosed. Please charge any additional fee or credit any overpayment in connection with this filing to our Deposit Account No. 02-3978. A duplicate of this notice is enclosed for this purpose.

Respectfully submitted,
Clayton P. Spitz et al.

By: 

Mark E. Stuenkel
Registration No. 44,364
Attorney/Agent for Applicant

Date: June 10, 2003

BROOKS & KUSHMAN P.C.
1000 Town Center, 22nd Floor
Southfield, MI 48075
Phone: 248-358-4400
Fax: 248-358-3351

Enclosure - Appendix

IX. APPENDIX - CLAIMS ON APPEAL

1. A method for quantifying risk of fraud associated with a purchasing card transaction, the method comprising:

obtaining a charge-back history associated with a consumer involved in the purchasing card transaction; and

determining a risk score based on the charge-back history.

2. The method of claim 1 wherein the step of obtaining a charge-back history includes obtaining a reason code for each charge-back included in the charge-back history.

3. The method of claim 2 further comprising weighting each charge-back included in the charge-back history based on the corresponding reason code.

4. The method of claim 1 further comprising determining how each charge-back included in the charge-back history is associated with the purchasing card transaction, and weighting each charge-back based on the corresponding association with the purchasing card transaction.

5. The method of claim 1 further comprising obtaining additional charge-back history associated with a machine identification number of a machine involved in the purchasing card transaction, and wherein the step of determining a risk score includes determining the risk score based on the additional charge-back history.

6. The method of claim 1 wherein the step of determining a risk score includes comparing the charge-back history to predetermined ranges of charge-backs.

7. The method of claim 1 wherein the step of determining a risk score is performed using a linear risk model.

8. The method of claim 1 wherein the step of determining a risk score is performed using a regression risk model.

9. The method of claim 1 wherein the step of determining a risk score is performed using a decision tree risk model.

10. The method of claim 1 wherein the step of determining a risk score is performed using a neural network risk model.

11. The method of claim 1 wherein the step of determining a risk score includes determining the risk score based on a plurality of purchasing card transaction characteristics.

12. A method for quantifying risk of fraud associated with a purchasing card transaction, the method comprising:

obtaining a charge-back history associated with a consumer involved in the purchasing card transaction, wherein the charge-back history includes charge-backs associated with a particular purchasing card account of the consumer, and a reason code for each charge-back;

weighting each charge-back based on the corresponding reason code; and
determining a risk score based on the weighted charge-backs.

13. A system for quantifying risk of fraud associated with a purchasing card transaction, the system comprising:

an authorization source for obtaining a charge-back history associated with a consumer involved in the purchasing card transaction, the authorization source including a risk model for determining a risk score based on the charge-back history.

14. The system of claim 13 wherein the authorization source includes a database for storing a reason code for each charge-back included in the charge-back history, and a processor in communication with the database and including the risk model, wherein the risk model includes instructions for determining the risk score based on the reason codes.

15. The system of claim 14 wherein the risk model includes instructions for weighting each charge-back included in the charge-back history based on the corresponding reason code.

16. The system of claim 13 wherein the risk model includes instructions for determining how each charge-back included in the charge-back history is associated with the purchasing card transaction, and instructions for weighting each charge-back based on the corresponding association with the purchasing card transaction.

17. The system of claim 13 wherein the risk model includes instructions for comparing the charge-back history to predetermined ranges of charge-backs in order to determine the risk score.

18. The system of claim 13 wherein the risk model comprises a linear risk model.

19. The system of claim 13 wherein the risk model comprises a regression risk model.

20. The system of claim 13 wherein the risk model comprises a decision tree risk model.

21. The system of claim 13 wherein the risk model comprises a neural network risk model.

22. A computer system for quantifying risk of fraud associated with a purchasing card transaction, the computer system comprising:

a database for storing a charge-back history associated with a consumer involved in the purchasing card transaction; and

a processor in communication with the database, the processor including a risk model for determining a risk score based on the charge-back history.